WHAT IS CLAIMED IS:

1. A current-in-plane (CIP) GMR sensor, comprising:

a GMR sensor stack;

a spacer layer formed over a free-layer of the GMR sensor stack; and

an in-stack biasing layer disposed over the spacer.

2. The CIP GMR sensor of claim 1, wherein the in-stack biasing layer comprises materials selected from the group consisting of NiFe, CoFe, NiFeCr, $NiFe_X$ and $CoFe_X$.

3. The CIP GMR sensor of claim 1 further comprising lead layers formed on either side of the GMR sensor stack.

4. The CIP GMR sensor of claim 3, wherein the lead layers comprises a layer of Rhodium disposed adjacent to the GMR sensor stack, a Tantalum layer formed over the layer of Rhodium and a layer of Platinum-Manganese formed over the layer of Tantalum.

5. The CIP GMR sensor of claim 4, wherein the layer of Platinum-Manganese is formed adjacent a portion of the in-stack bias layer.

6. The CIP GMR sensor of claim 3, wherein the in-stack biasing layer comprises a bias layer formed only over the spacer and a coupling layer formed over the bias layer and the layer of Platinum-Manganese.

7. The CIP GMR sensor of claim 6, wherein the bias layers and coupling layer each comprise a material selected from the group consisting of NiFe, CoFe, NiFeCr, $NiFe_X$ and $CoFe_X$.

8. The CIP GMR sensor of claim 1 further comprising a cap layer formed over the in-stack bias layer.

9. A magnetic storage system, comprising:

a magnetic storage medium having a plurality of tracks for recording of data; and

a current-in-plane (CIP) GMR sensor maintained in a closely spaced position relative to the magnetic storage medium during relative motion between the magnetic transducer and the magnetic storage medium, the CIP GMR sensor further comprising:

a GMR sensor stack;

a spacer layer formed over a free-layer of the GMR sensor stack; and

an in-stack biasing layer disposed over the spacer.

10. The magnetic storage of claim 9, wherein the in-stack biasing layer comprises materials selected from the group consisting of NiFe, CoFe, NiFeCr, $NiFe_X$ and $CoFe_X$.

11. The magnetic storage of claim 9 further comprising lead layers formed on either side of the GMR sensor stack.

12. The magnetic storage of claim 11, wherein the lead layers comprises a layer of Rhodium disposed adjacent to the GMR sensor stack, a Tantalum layer formed over the layer of Rhodium and a layer of Platinum-Manganese formed over the layer of Tantalum.

13. The magnetic storage of claim 12, wherein the layer of Platinum-Manganese is formed adjacent a portion of the in-stack bias layer.

14. The magnetic storage of claim 11, wherein the in-stack biasing layer comprises a bias layer formed only over the spacer and a coupling layer formed over the bias layer and the layer of Platinum-Manganese.

15. The magnetic storage of claim 9, wherein the bias layer and the coupling layer each comprise a material selected from the group consisting of NiFe, CoFe, NiFeCr, $NiFe_X$ and $CoFe_X$.

16. The magnetic storage of claim 9 further comprising a cap layer formed over the in-stack bias layer.

17. A method for providing a current-in-plane (CIP) GMR sensor with an improved in-stack bias layer with a thinner sensor stack, comprising;

forming a thin spin valve stack;

forming a spacer over the spin valve stack;

forming lead layers in a passive region outside the track;

forming an in-stack bias layer over the spacer for biasing a free-layer of the spin valve stack; and

forming a cap over the bias layer.

18. The method of claim 17, wherein forming the lead layers further comprises forming a layer of Rhodium adjacent to the GMR sensor stack, forming a Tantalum layer over the layer of Rhodium and forming a layer of Platinum-Manganese over the layer of Tantalum.

19. The method of claim 18, wherein the forming of the layer of Platinum-Manganese further comprises forming the layer of Platinum-Manganese adjacent a portion of the in-stack bias layer.

20. The method of claim 18, wherein the in-stack bias layer comprises a bias layer formed only over the spacer and a coupling layer formed over the bias layer and the layer of Platinum-Manganese.

21. The method of claim 17, wherein the forming of the bias layer and the coupling layer each further comprises using a material selected from the group consisting of NiFe, CoFe, NiFeCr, $NiFe_X$ and $CoFe_X$.